

# SYNPO2 Antibody / Synaptopodin 2 (FY12293)

Catalog No.	Formulation	Size
FY12293	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml	100 ug

#### **Bulk quote request**

Availability	1-2 days
Species Reactivity	Human
Format	Lyophilized
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Immunogen affinity purified
Buffer	Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na2HPO4.
UniProt	Q9UMS6
Applications	ELISA: 0.1-0.5ug/ml Western Blot: 0.25-0.5ug/ml Flow Cytometry: 1-3ug/million cells
Limitations	This SYNPO2 antibody is available for research use only.

### **Description**

SYNPO2 antibody detects Synaptopodin-2, encoded by the SYNPO2 gene on chromosome 4q26. SYNPO2 antibody is widely used in muscle biology, actin cytoskeleton research, and cancer studies. Synaptopodin-2 is an actin-associated protein highly expressed in muscle tissues, where it regulates cytoskeletal dynamics, sarcomere organization, and cellular migration. It is involved in stress fiber formation and focal adhesion assembly, contributing to cell shape and motility.

Structurally, Synaptopodin-2 is a large protein of ~126 kDa with multiple proline-rich motifs, actin-binding sites, and SH3-binding domains. It interacts with alpha-actinin, zyxin, and other cytoskeletal regulators. Alternative isoforms generated by splicing are expressed in specific tissues, providing diversity in cytoskeletal regulation. Synaptopodin-2 localizes to actin filaments, focal adhesions, and stress fibers.

Functionally, Synaptopodin-2 modulates actin filament bundling, focal adhesion dynamics, and muscle fiber organization. It is essential for maintaining sarcomere integrity and supports repair processes after muscle injury. Researchers use SYNPO2 antibody to investigate cytoskeletal dynamics, mechanotransduction, and muscle physiology.

Clinically, mutations in SYNPO2 have been linked to myopathy and other muscle disorders. Dysregulation of

Synaptopodin-2 expression is associated with cancer progression, where it influences invasion and metastasis. Its actinregulatory role positions it as a biomarker of cytoskeletal remodeling and tumor aggressiveness. NSJ Bioreagents provides SYNPO2 antibody for research in cytoskeleton biology, muscle pathology, and oncology.

Experimentally, SYNPO2 antibody is used in western blotting to detect the ~126 kDa protein, in immunofluorescence to visualize stress fiber association, and in immunohistochemistry to study expression in muscle and tumor tissues. Co-immunoprecipitation with SYNPO2 antibody identifies cytoskeletal partners including alpha-actinin and zyxin.

#### **Application Notes**

Optimal dilution of the SYNPO2 antibody should be determined by the researcher.

#### **Immunogen**

E.coli-derived human SYNPO2 recombinant protein (Position: L104-R1009) was used as the immunogen for the SYNPO2 antibody.

## **Storage**

After reconstitution, the SYNPO2 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.